Delayed Osseointegration

Implants lacking a complex surface topography\(^1\) and primary stability require more time for osseointegration.\(^2\)

Peri-implantitis

The prevalence of implants experiencing peri-implantitis has been reported in excess of 12%.\(^{3,4}\)

Crestal Bone Loss

Average implant crestal bone remodeling can exceed 1.5 mm following the first year of function, leading to compromised aesthetics.\(^5\)

T3 Implant is Designed to Deliver Aesthetic Results Through Tissue Preservation

Contemporary Hybrid Surface

Provided by complex multi-surface topography

Seal Integrity

Provided by a stable and tight implant/abutment interface

Integrated Platform Switching

Provided by a medialized implant/abutment junction
Contemporary Hybrid Surface

Coarse and Fine Micron Surface Features Create an Average Mean Surface Roughness Value of 1.4 μm in the Threaded Portion of the Implant.¹⁴

Coarse and fine micron features

Coarse: (10+ microns) via resorbable calcium phosphate media blast

Fine: (1 - 3 microns) via dual acid-etching (DAE) on top of the blasted surface

Fine micron features on the implant collar

(1 - 3 microns) via dual acid-etching (DAE)

Option for nano-scale features along the full length of the implant

via Discrete Crystalline Deposition (DCD) of calcium phosphate
Seal Integrity

A stable, tight implant/abutment interface minimizes abutment micromotion and reduces potential microleakage.\(^\text{15}\)

- Seal integrity test was performed by Biomet 3i July 2011 - June 2012. In order to test the implant systems, a dynamic - loading leakage test was developed and executed. The test set-up was adapted from ISO14801, Dentistry - Implants - Dynamic Fatigue Test for Endosseous Dental Implants.
- Five samples each of the three competitive implant systems were evaluated.
- The mean seal strength (N) at which each of the systems leaked or fractured is detailed in the graph.
- Bench test results are not necessarily indicative of clinical performance.

Integrated Platform Switching

Bone remodeling with integrated platform switching

Integrated platform switching medializes the implant/abutment junction (IAJ) inward, creating a biologic width between connective tissue and the IAJ, helping to maintain bone levels.\(^\text{20}\)

Reduced crestal bone loss

Studies show implants with the integrated platform switching feature demonstrated crestal bone loss as low as 0.37 mm.\(^\text{21}\)

Reduction in crestal bone remodeling vs. non platform-switched implants\(^\text{22}\)

A medialized implant/abutment junction provides support for connective tissue, reducing the potential for recession by 50%.\(^\text{21}\)

Implant/abutment seal strength

Designed to reduce microleakage through exacting interface tolerances and maximized clamping forces.

Implant/abutment clamping force

Use of the Gold-Tite\(^\text{®}\) Screw increases Certain\(^\text{®}\) Implant/abutment clamping force by 113% vs. a non-coated screw.\(^\text{18}\)

Proprietary Gold-Tite Surface lubrication allows the screw to rotate further, increasing clamping force and maximizing abutment stability.\(^\text{19}\)
Contemporary Hybrid Implant Design

**Primary Stability**

Initial Bone-to-Implant Contact is a major contributor to the implant’s stability. The specifications of the T3 Implant are held to rigorous tolerances to provide a closely integrated implant-to-osteotomy fit, creating a dental implant system that helps to achieve primary stability.

**Osseointegration**

In preclinical studies, the T3 with DCD Surface demonstrated increased integration strength throughout the healing phase as compared to less complex surface topographies.

**No Increased Peri-implantitis Risk**

The T3 Implant utilizes the proven Osseotite® Surface technology at the coronal aspect of the implant. In a five-year study, the dual acid-etched surface of the Osseotite Implant presented no increased risk of peri-implantitis or soft-tissue complications versus a machined surface.

**Multicenter, Randomized Controlled 5-Year Study Of Hybrid And Fully Etched Implants For The Incidence Of Peri-Implantitis**

84% of all SBI scores were “0” (absence of bleeding); 13% of scores were “1” - isolated bleeding spot.

No implant (test or control) showed changes in probing depths greater than 3.0 mm.

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* Preclinical studies are not necessarily indicative of clinical performance.
Hopeless central incisors.

Two T3 DCD Tapered Implants 5 mm(D) x 4.1 mm(P) x 13 mm(L) placed immediately after extractions.

An acrylic-resin splinted provisional restoration was cemented to the PreFormance Posts.

Two PreFormance® Provisional Posts adjusted intraorally.

One month follow-up.

Final result with definitive prosthesis six months post-extractions and implant placement. Note the maintenance of the facio-palatal width.

Periapical at six months follow-up showing bone preservation both distally and mesially.

Cone beam images at six months. Note the facial wall thickness is maintained at 2.7 mm.
References


1 Dr. Block, Dr. Goené, Dr. Grunder, Dr. Lazzara, Dr. Makigusa, Dr. Meltzer, Dr. Méndez, Dr. Meyenberg, Dr. Nevins, Dr. Ostman, Dr. Rodriguez, Dr. Segalà, Dr. Scutellà, Dr. Tarnow, Dr. Testori and Dr. Vela have financial relationships with Biomet 3i, LLC resulting from speaking engagements, consulting engagements and other retained services.

2 Dr. Gubbi, Mr. Sutin and Mr. Towe contributed to the above research while employed by Biomet 3i.

References 6–10 discuss the Tapered Implant macrodesign, which is incorporated into the T3 Implant. References 10–13 discuss the Osseotite and/or NanoTite Implants’ dual acid-etched or DCD technology, which is incorporated into the T3 Implant. References 20–22 discuss PREVAIL™ Implants with an integrated platform switching design, which is also incorporated into the T3 Implant.
### Ordering Information

#### Tapered Implants

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<tr>
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**Contact us at 1-800-342-5454 or visit zimmerbiometdental.com**

(D) = Diameter  
(P) = Platform